Ascidiella aspersa

European sea squirt, Dirty sea squirt

Threat Scores

1. Ecological Impact
    - Significant fouling organism
    - Like other invasive tunicates, A. aspersa is a tough competitor that outcompetes and replaces native solitary tunicates
    - Forms large populations and subsequent high amounts of biomass (Pederson et al. 2003), which redirects energy pathways to decomposers and not to higher trophic communities because it lacks many predators
    - It also directly competes with other native filter-feeding fauna of economic importance like scallops, mussels, and oysters
2. Invasive Potential
    - Low potential for spread in ocean currents
    - Fertilization is enhanced by low energy, sheltered environments
    - This species is able to withstand variable salinities, enabling it to spread to estuaries
    - A fouling organism on ship hulls, anchor chains, marina floats, shellfish beds, and other firm surfaces
3. Geographic Extent
    - Regionally pervasive
4. Management Difficulty
    - Changes to salinity and copper compound management options suggested to clean fouled surfaces
    - No known successful eradications in marine environments

Geography and Habitat

1. Native: Norway, Baltic Sea, Irish Sea, English Channel, Mediterranean Sea, northwest African coasts
2. Introduced: Atlantic Coast from Maine to Virginia
3. Habitats
    - Marine, fouling communities, estuaries/bays, coastland
    - Found in shallow, subtidal waters attached to docks, pilings, ropes and other submerged structures
    - Prefers calm, protected waters with steady current
    - Occurs in both marine and estuarine waters

Invasion Pathways

1. Ballast water and sediments
2. Natural spread
3. Stocking in open water
4. Hull/Surface fouling

Non-Native Locations

1. 40- Gulf of Maine/Bay of Fundy
2. 41- Virginian

Sources

1. Molnar, Jennifer et al. 2008. Assessing the global threat of invasive species to marine biodiversity. Frontiers in ecol-

ogy and the environment. Vol. 6, No. 9, pp. 485-492.
2. http://conserveonline.org/workspaces/global.invasive.assessment
3. http://www.issg.org/database/species/ecology.asp?si=1126&fr=1&sts=&lang=EN
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